29. DIVERSITY OF BUTTERFLIES NEAR A POOL IN THE SANJAY GANDHI NATIONAL PARK, MUMBAI

Along with three others, I visited the Sanjay Gandhi National Park (SGNP), Mumbai, on December 5, 1999. We had planned to sit near a shallow pool created by a natural dyke on the adjoining BNHS land. Apart from this pool, most of the streams and puddles in the area dry out by November end. The water body, approximately 12 sq. m in area and one metre in depth, is situated on a rocky bed at the base of a valley. The surrounding hills rise about 15 m above the pool. The neighbouring forest is tropical, moist, semi evergreen, typical of SGNP. Although the stream is dry, the pool is fed by ground water that trickles through cracks in the adjoining rocks, forming a wet patch of *c.* 4 sq. m, that is coated with algae and moss. The terrain in the immediate vicinity is rocky, topped with a carpet of dry leaves of *Bombax ceiba*, *Garuga pinnata* and *Pongamia pinnata*. This leaf litter ensures that the moisture stays trapped even during the hot hours of the day, inviting a variety of Lepidoptera.

We reached the site at 0900 hrs and stayed till 1115 hrs. In this short span of time, 35 species of butterflies belonging to five families visited the wet portion surrounding the pool, for mud-puddling. The butterflies landed directly on the wet patch or on the surrounding leaf litter.

I have been visiting SGNP for over a decade, but have never seen such a diverse gathering of butterflies at a single site. Among the most abundant species were the Commander, Common Leaf Blue, Common Sailor, Chocolate Pansy, Common Leopard, and Psyche (more than 15 individuals each), while the least common were the Gaudy Baron, Silverstreak, Common Silverline, Longbanded Silverline, Grey Pansy and Common Hedge Blue (one each).

Butterflies observed at SGNP:

Papilionidae (Papilioninae)

1. Common Mormon (*Princeps polytes*)

Pieridae (Pierinae)

2. Psyche (*Leptosia nina*)
3. Pioneer (*Anaphaeis aurota*)
4. Common Wanderer (*Pareronia valeria*)
5. Yellow Orangetip (*Ixias pyrene*)
6. Great Orangetip (*Hebomoia glaucippe*)

Pieridae (Coliadinae)

7. Common Emigrant (*Catopsilia pomona*)
8. Three Spot Grass Yellow (*Eurema blanda*)

Lycaenidae (Theclinae)

9. Common Leaf Blue (*Amblypodia anita*)
10. Silverstreak (*Iraota timoleon*)
11. Common Silverline (*Spindasis vulcans*)
12. Longbanded Silverline (*Spindasis lohita*)

Lycaenidae (Polyommatinae)

13. Opaque six-line (*Nacaduba beroe*)
14. Common Cerulean (*Jamides celeno*)
15. Pea Blue (*Lampides boeticus*)
16. Dark Cerulean (*Jamides bochus*)
17. Common Pierrot (*Castalius rosimon*)
18. Grass Jewel (*Zizeeria trochilus*)
19. Common Hedge Blue (*Acetolepis puspa*)

Nymphalidae (Styrinae)

20. Dark Brand Bushbrown (*Mycalesis mineus*)

Nymphalidae (Nymphalinae)

21. Common Leopard (*Phalanta phalantha*)
22. Chocolate Pansy (*Precis iphita*)
23. Lemon Pansy (*Precis lemonias*)
24. Grey Pansy (*Precis atlites*)
25. Great Eggfly (*Hypolimnas bolina*)
26. Common Sailor (*Neptis hylas*)

27. Common Sergeant (*Parathyma perius*)
28. Commander (*Moduza procris*)
29. Red Baron (*Symphaedra nais*)
30. Gaudy Baron (*Euthalia lubentina*)

Nymphalidae (Danainae)

31. Common Crow (*Euploea core*)
32. Plain Tiger (*Danaus chrysippus*)
33. Glassy Tiger (*Parantica aglea*)
34. Blue Tiger (*Tirumala limniace*)

Hesperiidae (Pyrginae)

35. Small Common Flat (*Sarangesa dasahara*)

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30. SOME OBSERVATIONS ON LARVAL AND PUPAL DIMORPHISM IN THE COMMON NAWAB BUTTERFLY (*ERIBOEA ATHAMUS*)

The life cycle of *Eriboea athamus* has been studied by T.R. Bell (1909). The variations observed in the larval and pupal coloration during my studies on this species are given below.

Egg: According to Bell (1909), the butterfly lays its eggs only on the upper side of the *Acacia* spp. leaf in a sunny place. I noted that the eggs were laid on both the upper and lower surfaces of the leaflet. About five eggs were laid on each plant. The eggs hatched after 4 days and measured about 0.1 mm in diameter.

Larva: When the larva has just hatched, it is pale, transparent yellowish-brown in colour, measuring about 0.4 mm in length with a dark, coffee brown head bearing four minute horns. Within four hours of hatching, the colour starts turning light green as they start feeding on the *Acacia* leaves.

Two types of larval coloration were observed. In the first type, segments 4-11 had a yellow band, unlike the white one described by Bell. Again, the broad bands on segment 6, 8 and 10 are yellow, bordered anteriorly with black, while Bell observed white bands with a black anterior border.

The second type had three broad, dark yellow bands on segments 6, 8 and 10, bordered by a black band. Also, the narrow, horizontal yellow band on segment 3 had a black outline. Thin yellow lines alternated with the yellow bands.

Pupa: Similarly, dimorphic forms of pupa were observed. Bell (1909) recorded yellow or light green pupa, with white stripes, spots and bands. The pupa of the first type of caterpillar observed was light green, whereas the pupa of the second type was dark green with prominent white spots, bands and lines. In both cases, none of the pupae were yellow.

Habits: The resting habit of the larva has been observed by Bell (1909) "When the larva grows too large for one bed, it makes another, soon requiring 3 or 4 or more leaflets to rest upon". During the present study, it was observed that the larva never needed another leaflet to rest upon. It remained on the same leaflet until pupation. According to Bell (1909), it returns to the same silk bed after feeding. Another interesting habit observed in the caterpillars reared in captivity was that they removed their own faecal pellets with their mouth, if the pellet came in the way, or if it was still attached to the anal region. When teased it moves with a halting motion spreading abundance of silk (Bell 1909).

The feeding habit of the larva is different. It begins feeding on a single leaflet eating on one sub-leaf of a leaflet. It starts at the nodal end of the sub-leaf, returning just above the same position till the sub-leaf is completely eaten or becomes "sickle shaped"